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WPI Acc No: 95-118661/199516
Trans-nasal and trans-lung peptide and protein drug - comprises secretory Leukocyte Protease Inhibitor to improve drug absorption
Patent Assignee: TEIJIN LTD (TEIJ)
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Patent Details:

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JP 7041428	A		6			

Abstract (Basic): JP 7041428 A

Trans-nasal and trans-lung peptide and protein drug with improved absorption contains Secretory Leukocyte Protease Inhibitor (SLPI).

ADVANTAGE - Drug absorption is improved through mucous membrane of nose or alveoli due to the addition of SLPI, which is protease inhibitor. Pref. peptide and protein drug is calcitonin, insulin, glucagon, luteinising hormone releasing hormone (LHRH), growth hormone, growth hormone releasing hormone (GHRH), growth hormone releasing factor (GRH), enkephalin, insulin growth factor (IGF), calcitonin gene related peptide (CGRP), vasopressin, atrial natriuretic factor (ANF), interferon, erythropoietin and/or granulocyte colony formation stimulating factor (G-CFS). Calcitonin is salmon, eel, human, porcine, chicken, bovine, sheep and/or rats calcitonin. Transnasal and trans lung prepn. is pref. in a form of aq. liq. or powder.

EMBODIMENT - The amt. of peptide and protein drug is from the e.g. to 20 fold of the dosage used for injection pref. 2-10 fold. The amt. of SLPI is 0.1-10 fold of peptide and protein drug, pref. 1-5 fold. Aq. liq. is prepd. by dissolving fine powder peptide and protein drug and SLPI in aq. base such as water, saline and buffer soln.. Powder is obtd. by mixing fine powder peptide and protein drug with SLPI and water absorbable and water-sparingly soluble base such as cellulose, polysaccharide, gum and bridged vinyl polymer, pref. cellulose.

In an example, to homogenate soln. (0.5 ml) obtd. from human nasal mucous membrane were added salmon calcitonin (SCT) soln. (0.1mg/ml) and SLPI 95.0 ml). The whole mixt. was incubated at 37 deg.C., and some of SCT was not decomposed. The results showed that inhibitory rate of SLPI was 75%, whereas 37% of that of alpha 1-antitrypsin and 14% of that of alpha 2-macroglobulin.

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Derwent Class: B04; B07
International Patent Class (Additional): A61K-009/08; A61K-038/22; A61K-038/23; A61K-038/26; A61K-038/28; A61K-047/42